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No. 06-937

In the Supreme Court of the United States

QUANTA COMPUTER, INC., ET AL,

Petitioners,

v.

LG ELECTRONICS, INC.,

Respondent.

ON A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF OF *AMICI CURIAE* INTERDIGITAL COMMUNICATIONS, LLC AND TESSERA, INC. IN SUPPORT OF RESPONDENT

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Interest of the *Amici*

This brief is filed with the consent of the parties[1] on behalf of InterDigital Communications,

[1] The parties' blanket letters of consent have been filed with the Clerk in compliance with Rule 37.3. This brief was not authored in whole or in part by counsel for any party. No person or entity other than the *amici* made a monetary contribution to the preparation or submission of this brief.

LLC, and its affiliates (together, "InterDigital") and Tessera, Inc. InterDigital Communications, LLC develops technology for the wireless communications industry. The company's roots date back to 1972 and it employs approximately 240 engineers. It derives much of its revenues from licensing its technology to companies that manufacture cellular telephones and other mobile terminal devices. InterDigital's licensees include Apple, LG, NEC, Sharp, Research in Motion, Ericsson, Nokia and Sony-Ericsson.

Tessera is a leading provider of miniaturization technologies for the electronics industry. Tessera enables new levels of miniaturization and performance by applying its unique expertise in the electrical, thermal and mechanical properties of materials and interconnects. Tessera's technologies are widely adopted in high-growth markets, including consumer, computing, communications, medical and defense electronics. More than 20 billion semiconductors worldwide incorporate Tessera's technology. Tessera presently has over 500 issued United States patents, over 360 pending US patents, and over 50 licensees in the area of computer chip packaging technology, including the world's top component companies such as Intel, Samsung, Micron, Sharp, Sony, Toshiba and Texas Instruments, as well as a number of universities. Tessera's ability to continue to innovate depends upon its ability to license its technology and enforce its patents.

Summary of Argument

The viability of high technology industries in today's global economy depends in significant part on the ability of innovators to employ flexible licensing strategies that in many instances require separate licenses for components, systems and methods at different levels of the manufacturing, distribution and retail chain in order to effectively capture the value of all the patented inventions that are incorporated into today's sophisticated products and services. Contrary to the suggestion of certain economists and some briefs in this case, it is neither feasible nor desirable to look to a single level of that chain for recovery of the full value of the intellectual property that covers an innovation. In some cases the flexible approach used in the high tech industry involves the licensing of different patents at different levels of the integration chain. In other cases the strategy involves only licensing of know-how or trade secrets at other levels of the chain and does not involve licensing of any patents. Such licenses may include covenants not to sue for patent infringement or other causes of action. These modern approaches and how they differ from the patent exhaustion scenarios that have been the subject of prior decisions of this Court, are the focus of this brief.

The Respondent has clarified what this case is – and is ***not*** – about. That clarification is consistent with the interests of the *amici* who are filing this brief in support of Respondent. Moreover, because there are significant legal and practical differences between patent licenses and technology transfer

agreements, these *amici* are filing this brief to illuminate those differences. The case before the Court is restricted to the effect of downstream conditions in traditional patent license arrangements and does not involve any consideration of the significantly different circumstances raised by modern technology transfer agreements, especially those involving distribution chains with multiple levels of integration. It is important to the high technology industry and U.S. industrial competitiveness that the Court's decision be based on an understanding of these very real and significant practical differences.

The Respondent's brief contains extensive discussion of the legal issues in this case. That brief correctly notes that the components sold to Quanta by Intel are not covered by the patents LG asserts against Quanta and this case is therefore not a case of traditional patent exhaustion. These *amici* and others similarly situated also have patents on certain components and other patents on systems and methods. As is the case with LG, these *amici* and others will on occasion license companies at the top of the manufacturing, distribution and retail chain under certain patents to make components, while licensing others lower in the chain to sell finished products that are covered by the claims of a different set of systems and method patents. None of these licensing scenarios are properly viewed as instances of patent exhaustion. The purpose of this brief is to provide the Court with a view of the market that these *amici* know from their business experience surviving and growing in a global economy. This brief will also explain the important

differences between patent licenses and modern technology transfer agreements, differences that are significant in the context of any opinion this Court may issue.

Argument

I. Separate Licensing of Components, Systems and Methods at Multiple Levels Is Consistent With The Patent Act and This Court's Precedents and is Essential to the Economic Health of the High Technology Industry

The Respondent has effectively shown that separate licensing of component patents and system patents at multiple levels of the manufacturing, distribution and retail chain is consistent with the Patent Act, 35 U.S.C. § 1 *et seq*, and this Court's precedents. (Resp. Br. at 17-39) *Amici* fully support those arguments and believe that the legal analysis employed by the Respondent should be accepted by the Court. Properly viewed this case does not present any issue of patent exhaustion.

Petitioner argues, in part, that its position should be adopted by the Court because it reflects rational economic behavior. Petitioner states, solely

on the basis of academic writings,[2] that "[a] rational patentee cannot obtain more by negotiating separately with the manufacturer, distributor, retailer and consumer than he could have obtained by charging the entire amount to the first party in the chain and relying on it to pass the cost along in the form of higher prices." (Pet. Br. at 49) That statement is based on a false assumption – that LG is trying to profit from the same patent at different levels of the manufacturing/distribution chain. LG has conclusively demonstrated its claims against Quanta are based on patents that are different than those that cover the components purchased by Quanta from Intel. In any event, that statement of "Chicago school" economic theory may perhaps be valid in a world where there are no transaction costs and where all parties have complete access to every other party's financial data, but it is inaccurate as a

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[2] The *amici* question whether there is adequate empirical basis for assessing rational economic behavior in patent law. *See* George Priest, "*What Economists Can Tell Lawyers About Intellectual Property*," 8 RES. LAW & ECON. 19 (J. Palmer & R. Zerbe, eds. 1986) (stating that economic analysis of patent law is "one of the least productive lines of inquiry in all of economic thought" because of the severe limits inherent in theoretical models of innovation).

description of the real world,[3] particularly in cases where different patents are licensed at different levels. Petitioner's view totally ignores the value added by patented innovation at each level of the manufacturing and distribution chain and the right of the inventor to claim the innovation embodied in different patents at each level in order to capture the full economic value of the inventive contribution of the various patents – a principal endorsed by this Court.[4] Furthermore, licensors and licensees should enjoy freedom to contract as best suited to their businesses, as was done by LG and Intel in this case, as well as in the context of the various scenarios discussed in this brief. Limitations on that existing

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[3] The Chicago school theory has been criticized by a number of other economists. *See, e.g.,* John M. Vernon & Daniel A. Graham, *Profitability of Monopolization by Vertical Integration* 79 J. POL. ECON. 924, 924-25 (1971); MD Whinston, *Tying, Foreclosure and Exclusion*, 80 AMERICAN ECONOMIC REVIEW 837 (1980); JP Choi and C Stefandas, *Tying, Investment and the Dynamic Leverage Theory*, 32 RAND JOURNAL OF ECONOMICS 52 (2001); DW Carlton and M Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 RAND JOURNAL OF ECONOMICS 194 (2002). Chicago school economic theory was rejected by the European Commission in the Microsoft Antitrust case, Case COMP/C-3/37,792, Microsoft, European Commission Decision March 24, 2004 (http://ec.europa.eu/comm/competition/antitrust/cases/decisions/37792/en.pdf)

[4] *See Mazer v. Stein*, 347 U.S. 201, 219 (1954) (recognizing that "[t]he economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.'").

freedom can only diminish the competitiveness of our high tech industry in the increasingly competitive world market.

InterDigital, Tessera and other similarly-situated companies are engaged in businesses that function with a multi-level manufacturing and distribution chain. These companies operate at the top of that chain, inventing and refining fundamental technology used in the manufacture and packaging of small electronic and optical components including microprocessor chips and application-specific integrated circuits (ASICs). Their inventive breakthroughs often form the essential core of very valuable products and services that drive global consumer markets. Their innovations are typically technologies that are used by others and incorporated into electronic components or larger subsystems that ultimately become essential parts of a final electronic product or service.[5] Neither of the companies is currently a high volume manufacturer of products – they instead design electronic components such as semiconductor chips or packages for such components and create the technology needed for the manufacturing and packaging, such as the mask designs used by chip fabricators. Neither company's business model relies exclusively on the manufacturing of products to be sold to OEMs for integration into larger products ultimately sold to

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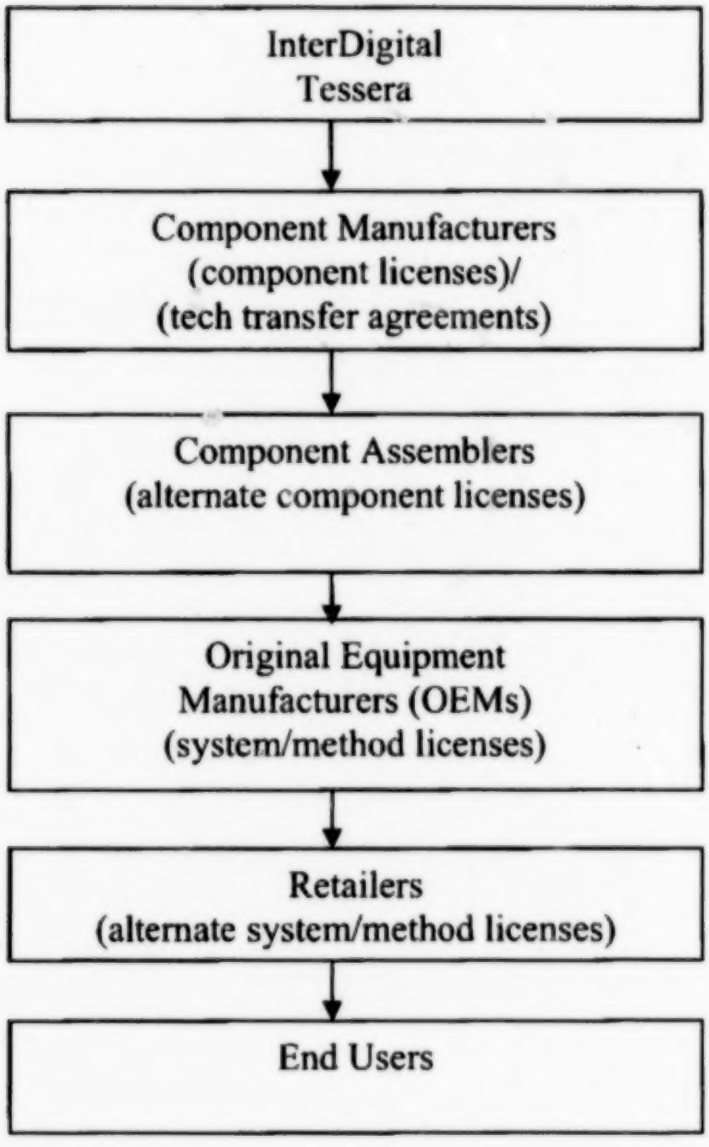
[5] Further information about the companies can be found at their respective websites, http://www.interdigital.com and http://www.tessera.com

end users. Rather, both companies rely significantly on revenues obtained as a result of licensing their innovative technologies to manufacturers and assembly houses.

In an attempt to fully protect their innovations, *amici* sometimes obtain separate patents for the components and the systems or methods that incorporate those components into finished products, just as is the case in the LG/Intel/Quanta case before this Court. In other cases, however, these companies may obtain a single patent with separate apparatus, system and method claims. In either case, the key point is that the component claims or patents are distinct from the system and method claims and licensing of the components should not foreclose separate licensing of the systems or methods. In either case these licensing scenarios do not present the fact patterns that have been before this Court in its prior patent exhaustion cases and are therefore not subject to the exhaustion analysis urged by the Petitioner.

Although there are differences in the business models of Tessera and InterDigital and the products developed by each, both companies are in a position to take advantage of one or more of the licensing scenarios previously discussed. Both companies operate in a business environment that involves several different enterprises in the production of products. For example, a typical distribution chain for InterDigital and Tessera technology will be depicted as follows:



In such a typical multi-level chain that ultimately delivers products or services there are a few component manufacturers and assemblers, several OEMs and thousands to millions of end users, such as individual consumers who purchase a cellphone. Companies like these *amici* may enter into component licensing agreements with one or more component manufacturers or assemblers. They may then enter into separate agreements to license

other patents whose claims build on the components with several OEMs. They may also have system or method license agreements with retailers, which can include traditional consumer outlets or entities that incorporate the product into a larger consumer offering such as, in the case of InterDigital, a wireless network carrier. They do not have direct agreements with end-users because such agreements are impractical and contrary to the business model of the final entity that services the end user. As is the case with LG, the companies do not ordinarily assert claims against the customers of their licensees based on licensed components or products purchased by those customers.

Petitioner suggests that companies like InterDigital and Tessera can maximize their profits by licensing only the component manufacturers and having those companies pass along the costs of those licenses to the other distribution levels. That is a simplistic view of a very complicated technological reality and misses the point of this case – that a set of patents covering a component does not have the same value as a set of *different* patents that covers a system-level invention. Further, the suggestion reflects a lack of knowledge of the global economy in which *amici* must compete. In addition, it is a misconception that, by licensing only the component manufacturers, innovators of fundamental technologies can achieve a return on investment for their shareholders that will encourage future innovation. Petitioner's suggestion ignores the different business models and arrangements s that exist at the multiple points in the chain and the various levels of innovation that may take place at

each level. The suggestion also assumes – falsely – that the component manufacturers have access to the financial data of every downstream participant and can make rational business decisions based on the downstream economics. In some instances, the component manufacturers might be economically pressed by the downstream players to reduce costs of goods, leaving companies like *amici* to license the different technologies at various points of the chain to achieve their full economic return.

In the real world component manufacturers often operate under different business conditions, employ different production models and have different customers than OEMs and retailers. These economic realities mean that companies like InterDigital and Tessera need the flexibility to enter into licensing deals with different OEMs and retailers where the terms for similar products may vary significantly because of the different market positions that different OEMs or retailers occupy. Because of the multi-tiered nature of these markets, component manufacturers may not have dealings with or access to the OEMs and retailers who use the innovative technology of companies like InterDigital and Tessera.

More importantly, these component manufacturers often have no need for a license to the patents that encompass more than just the component they sell. Thus, they cannot "negotiate" on behalf of OEMs and retailers as the Chicago school economists suggest. In fact, such component manufacturers are in fierce competition with each other for sales to such OEMs and retailers and have no economic incentive whatsoever to obtain a fair

rate of return for entities such as the *amici*. InterDigital, Tessera and companies like them may therefore choose to enter into separate licensing agreements with the component manufacturers, OEMs and retailers for their separate technologies to obtain in the composite the fair rate of return required to sustain their business models. Often, those separate agreements enable these companies to realize the full value of the intellectual property encapsulating their innovative technologies. The rule advocated by Quanta that would grant downstream manufactures a "free ride" when they build on or incorporate parts licensed to component manufacturers would significantly limit the ability of these companies to realize the full economic potential of their creations, and reduce the incentive for further investment in innovation.

The real world experience of the *amici* is well reflected in the Department of Justice and the Federal Trade Commission's joint "Antitrust Guidelines for the Licensing of Intellectual Property."[6] In explicitly recognizing the "procompetitive benefits of licensing" the guidelines state that "[i]ntellectual property typically is one component among many in a production process and derives its value from its combination with complementary factors." Guidelines, § 2.3.

The guidelines further recognize that "[t]he owner of intellectual property has to arrange for its

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[6] Antitrust Guidelines for the Licensing of Intellectual Property," U.S. Department of Justice and the Federal Trade Commission (April 6, 1995). These guidelines are available at http://www.usdoj.gov/atr/public/guidelines/0558.pdf.

combination with other necessary factors to realize its commercial value." *Id.* A flexible and robust licensing program "can facilitate integration of the licensed property with complementary factors of production" and "can be used to give a licensee an incentive to invest in the commercialization and distribution of products embodying the licensed intellectual property and to develop additional applications for the licensed property." *Id.* Finally, the guidelines explicitly recognize that the benefits of licensing restrictions "apply to patent, copyright, and trade secret licenses, and to know-how agreements." *Id.*

The patent exhaustion cases relied on by the Petitioner involve a sale of a patented item coupled with attempted restrictions on the sale or use of that item by downstream users. The Respondent has correctly pointed out that this case is substantially different and involves an assertion of different patents to prevent the unauthorized manufacture of systems and the use of methods covered by those separate patents. This Court should not upset the established freedom and flexibility of modern licensing contracts by extending the old precedents to cover modern business practices that sustain our economy. The decision of the Court of Appeals for the Federal Circuit in this case is sensitive to modern licensing realities and should be affirmed.

II. Modern Licensing in the High Tech Industry Often Uses Technology Transfer Agreements That Differ Substantially From Patent Licenses and Should Not be Seen as Raising Any Patent Exhaustion Issues, Regardless of the Decision in This Case

In some cases the form of licensing agreements in the high-tech industry will be patent licensing agreements like the one between LG and Intel at issue in this case. In many cases, however, the form of agreement will be significantly different.

The intellectual property of both InterDigital and Tessera consists only in part of patents.[7] Much of the value of the innovative and widely adopted wireless solutions and chip packaging technologies these companies invent comes in the form of circuit diagrams, layout specifications, component masks, process specifications, design tools, prototype systems, performance testing and results, software and technical know-how. The intellectual property that comprises the entire technological innovation package is sometimes protected as trade secrets or through copyright and not through patents. In order to enable component manufacturers to build the devices that incorporate this technology, it is necessary to expose and possibly transfer a wide scope of that intellectual

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[7] InterDigital holds over 3,000 US and foreign patents and has over 9,000 patent applications pending. (http://www.interdigital.com/patents) Tessera has over 500 issued US patents and over 350 pending US applications.

property to them, and to train them in the use of the technology.

Companies like these *amici* often enable component manufacturers at the top of the chain to implement their technology through comprehensive technology transfer agreements which involve not only a transfer of, for instance, trade secret and other protected information, but often include an exchange of personnel to transfer know-how and assist in a successful implementation of the technology and operation of the facility and tools that are needed for such implementation. The consideration obtained for the transfer of the technology is just that – a technology transfer fee, and not a patent license fee. Thus, such consideration is in most cases based on the services to be provided by the licensor in transferring the technology (for example, payment for man-hours spent to transfer the licensor's technologies, in training employees of licensee, ensuring proper implementation of the technology, etc.) and not on a royalty associated with the sale of the components.

These agreements will often contain an explicit provision that they are not patent licenses. In order to assure the component manufacturer that it can manufacture the chips, the technology transfer agreement may also include a non-assertion provision that shields the component manufacturer from a patent infringement suit. This is a well established business practice sometimes utilized by participants in this global multi-tier product/service chain model to achieve fair rates of return for innovation. The component manufacturers, OEMs and retailers usually have far greater bargaining

power than *amici* and thus are in a better position to negotiate royalty rates that reflect the marketplace and ever changing commercial realities.

Technology transfer agreements have not been considered by the Court in any of the prior patent exhaustion cases. Because those agreements often are not tied to any sale of products or licensing of any patent, they would not fall under this Court's patent exhaustion precedents. There are obviously no post-sale restrictions based on patents in a technology transfer agreement that does not include any patent licenses. When no patent licenses are granted, there cannot be an issue of patent exhaustion. The rationale for patent exhaustion simply does not apply to technology transfer agreements that do not include patent licenses. Because of that fact, and because this case does not involve any such agreement, the Court should not render a decision that inadvertently implicates technology transfer agreements.

Conclusion

For the reasons stated in Respondent's Brief and this brief, the Court should affirm the judgment of the Court of Appeals for the Federal Circuit.

Respectfully submitted,

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